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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,393	08/20/2001	Albert James Yovichin	DN1998168US	2980

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Roger D Emerson
The Goodyear Tire & Rubber Company
1144 East Market Street
Patent Department D 823
Akron, OH 44316-0001

EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,393

Applicant(s)

YOVICHIN ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

New claim 10 defines that the center region thickness is "greater than" the thickness of the lateral region. The original disclosure however only describes the thickness relation between these regions as being "at least twice", not simply "greater". In other words, there is no original description of the center region being "greater than" the lateral region and thus this was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. this is new matter. A range of ">2T" does not describe or support a new range of ">T" as the new range includes values (i.e. >T but <2T) that were never originally described.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiberling (US 4,166,883) or GB 2224031 to Uniroyal taken in view of Mirtain (US 4,065,338) and/or Böhm (US 4,089,360).

These references are applied for the same reasons as set forth in the last office action. With respect to new claim 10 (and corresponding amendments to claim 2), it is again noted that the primary references suggest precuring the innerliner before

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assembly with the tire, these curing methods including "usual methods of curing" in Seiberling (note esp. col. 4, lines 16-31) and including a conventional sulfur cure in GB '031. The artisan would thus clearly have been taught or motivated to adopt the well known and conventional means to cure rubber sheets, it being of course *extremely* well known to use a curing press (i.e. with two adjacent press platens, etc.) to cure rubber sheets, use of such extremely well known and conventional means being obvious. As to the platen configuration, although the primary references do not explicitly suggest any particular cross-sectional configuration for the liner (it thus being presumed that such would be of uniform thickness and thus the artisan would use flat platens absent some teaching to the contrary), the secondary references clearly identify a known problem in tire building - namely the fact that when a flat built tire is shaped to toroidal form, a uniform liner must of necessity become thinner towards the crown because of the simple fact that the diameter/circumference of the material is increasing with toroidal shaping. These references however also clearly identify a known solution to this problem (other than simply thickening the entire liner) - namely to make the liner thicker in the central regions to counteract the thinning with shaping. To form a liner in such contoured form would therefore have been obvious for the clearly expected advantage of avoiding the thinning of the liner, this also enabling the use of less overall material since a thicker than necessary overall thickness layer need not be used. In modifying the conventional press cure to precuring such a contoured liner (as taught by the primary references in order to enable bladderless cure) it is submitted that it would have been readily apparent to the artisan that the platens should be appropriately shaped to

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the desired shape of the liner. In other words, if one is trying to mold/cure a certain shape material, they use a cure press with platens that are of the desired shape. This represents an entirely expected and entirely obvious step for the ordinary artisan. For example, when one is trying to cure a green tire in a curing press, the press is obviously shaped to the desired shape of the article being cured, as would have been readily apparent to the artisan. None but the expected results would be achieved.

4. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Böhm (US 4,089,360).

This reference is applied herein for the same reasons as set forth in the last office action. The above discussion of claim 10 is also considered applicable here.

5. Applicant's arguments filed May 27, 2003 have been fully considered but they are not persuasive.

It is first argued that Seiberling '883 does not teach a profiled precured inner liner. This is not disputed. However, for reasons of record in the statement of rejection, it is again submitted to have been obvious to profile the liner as claimed. It is also argued that Mirtain is directed to an uncured liner for use with a bladder cure. This is also not disputed. However, this reference provides clear evidence of an understanding by the artisan of a known problem in tire building - namely the fact that when a flat built tire is shaped to toroidal form, a uniform liner must of necessity become thinner towards the crown because of the simple fact that the diameter/circumference of the material is increasing with toroidal shaping (e.g. note col. 1, lines 21-27 and 40-46 of Mirtain).

While it is agreed that this reference was not concerned with trying to provide a

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bladderless cure and thus only describes the more conventional uncured liner, it is submitted that the ordinary artisan would have certainly appreciated that the problem of thinning of the liner would be present *regardless* of whether the liner is uncured or precured. In other words, the simple geometric realities of an increasing circumference when shaping from flat to toroidal form are present *regardless* of the cure state of the innerliner and it is considered that the artisan would have expected the solution taught by the reference (selective thickening) to also suitably provide the desired results regardless of the cure state of the liner. The Böhm reference further supports this finding insofar as it provides a liner that is in important part precured as well as contoured to avoid these same thinning problems (e.g. col. 3, lines 18+; col. 8, lines 32+). To form a liner in such contoured form would therefore have been obvious for the clearly expected advantage of avoiding the thinning of the liner, this also enabling the use of less overall material since a thicker than necessary overall thickness layer need not be used.

It is also argued several times that the Böhm patent teaches that the laminate is cured after it is incorporated into the final tire structure. This is not disputed but ignores the fact that the laminate includes uncured strips only for bonding reasons - the important distinguishing feature of the laminate is however that it include the precured part. Thus, the teaching of thickening for even a precured liner is still clearly present, this providing additional evidence of a reasonable expectation that the contoured liner would suitably function to yield the desired results even if precured. It is submitted however that even without this teaching, the artisan would still have been expected to

understand and expect a contoured liner to suitably function to avoid thinning regardless of the cure state thereof - the geometric realities are present in either case as would be readily apparent. Further, as noted in the last office action, although it is recognized that the Böhm liner includes some uncured layers, it still clearly includes a predetermined portion of full length that is precured as claimed, it not being considered that anything in the present claims excludes the presence of such additional layers.

It is also argued that the references do not provide guidance on selecting the thickness variation and that the rejection is based upon obvious to try. This argument is unconvincing as the references are considered to provide clear guidance to the artisan - namely to thicken the liner corresponding to the amount of thinning that will occur - this thickness variation however simply reflects the relative circumferences in expanded versus unexpanded states, as would have been readily apparent, and thus the parameters would have clearly and certainly been chosen based upon the simple geometric relationships present in such a shaping process. Since this is the same goal as applicant, the artisan would thus have been expected to arrive at the same thickness variation relationships as applicant for this result effective variable, the desired result being the counteracting of the liner thinning with toroidal shaping.


6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 703-308-2062. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
August 11, 2003